

SAS:sas 08/18/08 Declaration of Dr Capehart

Attorney Reference Number 6863-67727-01  
Application Number 10/773,785

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

**In re application of:** Eric Finzi**Application No.** 10/773,785**Filed:** February 6, 2004**Confirmation No.** 7913**For:** METHOD FOR TREATING DEPRESSION**Examiner:** Vanessa L. Ford**Art Unit:** 2856**Attorney Reference No.** 6863-67727-01**FILED VIA EFS**SUBMITTED VIA EFS  
COMMISSIONER FOR PATENTS**DECLARATION OF DR. BRUCE P. CAPEHART UNDER 37 C.F.R. 1.132**

1. I, Bruce P. Capehart M.D., am a staff psychiatrist at the Department of Veterans Affairs Medical Center, Durham, North Carolina.
2. It is my understanding that claims 1-15 and 23-24 are rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Jahanshahi et al (Journal of Neurology, Neurosurgery and Psychiatry, 1992, 55:229-231) in view of Binder (U.S. Patent No. 5,714,468 published February 3, 1998) and further in view of Carruthers et al (U.S. Patent No. 6,358,917 B1 published March 19, 2002). Claims 16-21 were rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Jahanshahi et al., in view of Binder and Carruthers et al., further in view of Wagstaff et al. I have reviewed the claims of the above-reference patent application, Jahanshahi et al., Binder and Carruthers et al.

Torticollis is a positional abnormality of the head resulting from spasmotic neck muscles. Jahanshahi et al. teach the injection of Botulinum toxin into the superficial neck muscles (not facial muscles) of subjects to treat torticollis (see page 229, second column). Jahanshahi et al. report that the injection of botulinum toxin into the superficial neck muscles results in relaxation of the neck muscles, and straightening of the head and relief from neck pain, and *reduction of depression and disability associated with head position and pain* (page 231, first column) using the method of Tsui et al. Tsui et al. (The Lancet 1986, 245-247, copy attached) describe the injection of Botulinum toxin A in subjects with torticollis. Botulinum

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toxin was injected in the trapezius, splenius capitus and contralateral sternomastoid. This method of treatment results in correction of head position (see Jahanshahi et al., page 230, second column).

Jahanshahi et al. measure depression in the patients following the administration of Botulinum toxin, using such measures as the Beck Depression Inventory. Jahanshahi et al. teach that depression in subjects with torticollis is "a reaction to the disorder" and that the improvement of depression was a "non-specific result" (page 231, second column). Jahanshahi et al. specifically do not study those subjects in which the torticollis was unaltered or worse following injection of Botulinum toxin into the neck muscles (see page 231, first column). As a psychiatrist, I understand that Jahanshahi et al. teaches the reduction of depression only secondary to the improvement in head position and the reduction in neck pain. Jahanshahi et al. does not suggest to a psychiatrist that Botulinum toxin should be used to treat depression in the absence of underlying torticollis.

Moreover, the innervation of the neck is through the spinal root of the accessory nerve (CN XI) and branches of the second and third cervical nerves (C2 and C3). The corrugator supercilius has innervation from a dual nerve supply with contributions from branches of the frontal, zygomatic and buccal branches of the facial nerve. The procerus has innervation through the buccal branch of the facial nerve. Thus, a psychiatrist or neurologist reading Jahanshahi et al. would not predict that injections of Botulinum toxin into the neck to have the same effect as injection of Botulinum toxin into the corrugator supercilli or procerus muscle, as the innervation is entirely different.

Binder teaches the reduction of headache pain by injecting Botulinum toxin. Binder et al. suggest the *extra-muscular* injection of Botulinum toxin, at any site in the face, cranium or neck associated with pain (see the abstract). Generally, a psychiatrist would not look to a therapeutic modality for torticollis to treat major depression, nor would they look to headache medications (such as taught by Binder) to provide a route of administration for a psychiatric disorder such as major depression (which has entirely different symptoms and etiology from either a headache or torticollis).

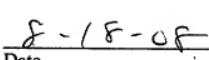
Carruthers et al. describe the use of Botulinum toxin to paralyze the depressor anguli oris muscle to alleviate downturn of a subject's mouth, as a cosmetic procedure.

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There is nothing in Jahanshahi et al., Binder et al. or Carruthers et al. that suggests to a psychiatrist to select a subject with depression using the accepted clinical characteristics for these diseases, such as would be delineated in the Diagnostic and Statistical Manual of Mental Disorders, 4<sup>th</sup> edition (DSM-IV) or the Beck Depression Inventory, and then treating them with Botulinum toxin by injection into the corrugator supercilii or the procerus muscle. Furthermore, based on the teachings of Jahanshahi et al., Binder et al. and/or Carruthers et al., a treating psychiatrist would not be motivated to use Botulinum toxin in combination with another treatment modality for depression, such as paroxetine (a selective serotonin reuptake inhibitor, SSRI).

3. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of the Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

  
Bruce Capchart  
Date